

1 We claim:

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A system for producing liquid compositions, comprising:

5 a hopper, having an interior compartment, a first opening for receiving soluble materials and a second opening for the passage of the liquid composition away from the hopper;

10 a receiving tank, having an interior compartment, and first and second openings; said first opening of said receiving tank being in open communication with said second opening of said hopper; said second opening of said receiving tank being adapted to discharge the liquid composition from said receiving tank; said receiving tank being operatively pivotably movable with respect to said hopper so that said receiving tank can be selectively moved between open and closed positions; and

15 a solids screen having upper and lower surfaces, operatively pivotably movable with respect to said hopper and said receiving tank between said second opening of said hopper and said first opening of said receiving tank.

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20 The system of claim 1 further comprising at least one generally elongated receiving tank retaining pin to selectively secure said receiving tank in its closed position.

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3.

The system of claim 1 further comprising at least one generally elongated solids screen retaining pin to selectively secure said solids screen in a position closely adjacent said second opening of said hopper.

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The system of claim 1 further comprising a hydraulic assembly, operatively connected to said receiving tank, to selectively move said receiving tank between said open and closed positions.

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5.

The system of claim 1 wherein said solids screen is adapted to freely pivot between the second opening of said hopper and the first opening of said receiving tank to selectively provide access to the interior compartments of said hopper and receiving tank and the upper and lower surfaces of said solids screen for cleaning and maintaining the same.

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The system of claim 1 wherein said second opening of said hopper and said first opening of said receiving tank are adapted to be received by the collection bucket of a mobile vehicle.

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7.

A system for producing liquid compositions, comprising:

a hopper, having upper and lower ends, inner and outer surfaces, and forward and rearward sides;

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a receiving tank, having an open upper end, a closed lower end, and forward and rearward sides; said receiving tank having a first opening formed therein adjacent the lower end thereof;

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said lower end of said hopper being in open communication with said open upper end of said receiving tank;

at least one spray bar operatively rotatably mounted in said hopper adjacent the upper end thereof; said spray bar having a plurality of holes disposed therein to allow fluid to escape therefrom; and

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a fluid inlet line operatively connected to and in open fluid communication with said spray bar.

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The system of claim 7 wherein said spray bar is elongated and has a longitudinal axis extending therethrough; said spray bar being adapted to be selectively rotated about said longitudinal axis to selectively control the aim of the plurality of holes formed therein.

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The system of claim 8 further comprising a motor operatively connected to said spray bar to selectively automate the rotational movement of said spray bar.

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The system of claim 7 wherein said spray bar is elongated and has opposite ends and a midpoint between said opposite ends; said plurality of holes being disposed along the length of said spray bar in spaced relation to one another so that distance between the holes proximate the midpoint is smaller than the distance between the holes proximate the opposite ends of said spray bar.

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11.

The system of claim 7 wherein said plurality of holes disposed within said spray bar vary in diameter.

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The system of claim 11 wherein said spray bar is elongated and has opposite ends and a midpoint between said opposite ends, the diameters of the holes disposed adjacent said midpoint being larger than the diameters of the holes disposed adjacent the opposite ends of said spray bar.

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The system of claim 7 wherein said spray bar is elongated and is further comprised of at least one oscillating spray nozzle disposed along the length of said spray bar.

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The system of claim 7 wherein said receiving tank is operatively pivotally movable with respect to said hopper so that said receiving tank may be selectively pivoted between open and closed positions.

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The system of claim 14 further comprising a solids screen, having upper and lower surfaces, operatively pivotally movable with respect to said hopper and said receiving tank.

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The system of claim 15 further comprising at least one generally elongated receiving tank retaining pin to selectively secure said receiving tank in its closed position.

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The system of claim 16 further comprising at least one generally elongated solids screen retaining pin to selectively secure said solids screen in a position closely adjacent said second opening of said hopper.

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The system of claim 17 further comprising a hydraulic assembly, operatively connected to said receiving tank, to selectively move said receiving tank between said open and closed positions.

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19.

The system of claim 15 wherein said solids screen is adapted to freely pivot between the lower end of said hopper and the upper end of said receiving tank to selectively provide access to the inner surfaces of said hopper and receiving tank and the upper and lower surfaces of said solids screen for the cleaning and maintenance of the same.

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The system of claim 7 wherein said lower end of said hopper and said upper end of said receiving tank are adapted to be received by the collection bucket of a mobile vehicle.

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The system of claim 7 wherein at least one observation window is formed in the outer surface of the hopper to provide visual access to the interior of the hopper.

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The system of claim 7 further comprising a float switch operatively connected to the inner surface of said hopper to detect and relay information regarding fluid levels within said hopper.

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